How stable is the stratification of Higher Education in England and Scotland?

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Abstract

This paper asks whether the institutional hierarchies defined by 'golden triangle', other Russell Group, other pre-1992 and post-1992 universities in England, and by ancient, old and new universities in Scotland, have become weaker since the 1990s. Using indicators constructed from UCAS data for 1996-2010, it finds a stable hierarchical relationship among the sectors within each country, with some indicators showing a slight widening of status differences between sectors towards the end of the period. The main exception was a slight 'upgrading' of new (post-1992) universities in Scotland early in the period. There was little change in the association of institutional sector with social class, but in England the association with private secondary schools became slightly stronger and the association with ethnicity weakened.

Key words: institutional status; post-1992 universities; student preferences; social reproduction; social class; ethnicity

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Introduction: institutional hierarchies in English and Scottish higher education

Before 1992 higher education (HE) in Great Britain was a binary system, with separate funding and governance arrangements for universities and for polytechnics (and Scottish central institutions). Compared to the universities the polytechnics were less research-intensive, offered more vocationally oriented programmes, were more often located in industrial cities and placed more emphasis on wider access, although these differences had been partly eroded by 'mission drift' (Scott 1995). In 1992 this binary system was replaced with a formally unified system. The polytechnics and Scottish central institutions became universities; most smaller and specialist institutions remained as colleges of HE but many acquired university status later as a result of expansion or mergers. The separate organisations which funded and regulated universities and polytechnics respectively were replaced by unified funding councils, with separate councils for England, Scotland and Wales. Formally, the 'administrative system' of HE (Rees and Istance 1997) changed from a binary system covering the whole of Great Britain to three unified systems covering England, Scotland and Wales respectively. Especially after 1999, when the Scottish Parliament and National Assembly for Wales were established with devolved responsibilities including HE, this led to some divergence in policies for HE. HE in Northern Ireland, which is part of the UK but not of Great Britain, was administered separately before 1992, and its one polytechnic had already been merged with a university (Osborne 1996).

However, the systems introduced in 1992, and especially those in England and Scotland, are not 'truly unified' and retain many characteristics of stratified systems (Scott 1995). Institutions within each system form a status hierarchy which is correlated with the date when institutions were founded or became universities, and consequently perpetuates the former binary distinction. This hierarchy is largely informal and not the direct result of policy, although it may be sustained and reinforced by policies (Witte, van der Wende and Huisman 2008; McCaig 2011). Within England the hierarchy divides the pre-1992 universities which formed the upper tier of the old binary system from the post-1992 universities created subsequently. Among the pre-1992 universities the Russell Group, a membership organisation of large research-intensive universities, represents a higher stratum. It was formed in 1994 when the leaders of 13 English and two Scottish universities met at the Russell Hotel in London; other universities have since joined by invitation and as at January 2013 there are 24 member institutions across the UK. The Russell Group has no official status but it is influential in policy debates and membership is seen as an indicator of institutional status. Within the Russell Group Oxford and Cambridge, the oldest foundations, have the highest status of all, and commentators sometimes distinguish a 'golden triangle' of Oxford, Cambridge and the large London institutions.

In Scotland, two universities are founder-members of the Russell Group, but academic and policy analysts frequently distinguish three groups of universities: four 'ancient' universities founded before 1600, four 'old' universities founded before 1992 and 'new' (post-1992) universities. The new universities, former central institutions, attract more working-class, mature and part-time students, and put less emphasis on research and

postgraduate study, than old and especially ancient universities (Gallacher 2006; SFC 2012). In both countries there is a further, more heterogeneous sector of non-university HE institutions. Programmes in most subjects are available in institutions at all levels of each country's hierarchy, but some subjects with controlled numbers such as medicine and dentistry, and a few other subjects such as classics and some modern languages, are available only or mainly in higher-status universities.

The distinction between pre-1992 and post-1992 universities has less salience in Northern Ireland, whose two universities were both established before 1992, and in Wales where several long-established institutions only became universities after 1992 because they had been constituent colleges of the University of Wales. Moreover, only two-thirds of Northern Irish and Welsh domiciles study at institutions in their home country, compared with around 95% of English and Scottish domiciles, making it more questionable to analyse Northern Ireland or Wales as distinct systems (Raffe and Croxford 2013). This paper therefore focuses on English and Scottish universities, and on the institutional hierarchies defined by the golden triangle, other Russell Group members, other pre-1992 universities and post-1992 universities in England, and by ancient, old and new universities in Scotland. We ask whether these status hierarchies, and in particular the hierarchy defined by the former binary division, have weakened since the 1990s.

There are several reasons why these hierarchies might have weakened. Since 1992 there has been a continuing process of institutional restructuring, in which new institutions have been created and existing ones, including many smaller and specialist institutions, have merged or changed status. These organisational changes might be expected to attenuate if not to transform the existing hierarchy. As Purcell, Elias and Atfield (2009, 12) argue, the UK HE sector 'continues to evolve and change in structure and divisions of labour across earlier boundaries. It is increasingly inappropriate to group HEIs together based on patterns and associations 17 years ago.' They propose an alternative classification of institutions based on entry qualifications demanded of, or held by, entrants. A second reason for expecting old institutional hierarchies to weaken (possibly to be replaced by different hierarchies) is the expansion of HE systems. This expansion is both quantitative – entrants through UCAS increased by 65% over the period of this study (Croxford and Raffe 2011) - and qualitative: HE is expected to serve an increasing range of social, economic and cultural purposes (Altbach 2008). 'Expansion and diversification' theories argue that expansion requires an increased division of labour among institutions and greater diversity (Teichler 2007). This argument is challenged by 'drift', 'flexibilisation' and 'cyclical' theories, which offer alternative interpretations of the dynamics of structural change in HE (ibid.; Huisman, Meek and Wood 2007). However, all these theories are premised on instability: they all predict significant change in the differentiation of HE even if the nature of this change is contested. A third possible reason for expecting change in institutional hierarchies in England is the marketisation of HE, reflected in such developments as the separation of teaching and research funding, the introduction and successive increases in tuition fees, the development of quality assurance systems and encouragement for new 'providers' to enter the market (Brown 2013). As we discuss below, advocates of

market-led strategies expect them to challenge traditional status hierarchies in HE. The introduction of fees may also have encouraged the trend towards studying closer to home in order to reduce costs, potentially weakening the influence of traditional status hierarchies on students' institutional choices (Holdsworth 2009).

The question of the stability of institutional hierarchies in HE is important, and not only within the UK, because it addresses two current issues of both sociological and policy interest.

The first issue concerns the relation of differentiation in higher education to social reproduction and social mobility. Students from more advantaged social backgrounds tend to be concentrated in higher-status institutions. Lucas' (2001) concept of 'effectively maintained inequality' suggests that as education expands, inequalities in total participation at a given stage, such as HE, are replaced by inequalities in the distribution across types of education within that stage. In many countries social inequalities in total HE participation have declined as HE has expanded, but less advantaged groups have disproportionately entered lower-status institutions (Arum, Gamoran and Shavit 2007; Clancy and Goastellec 2007; Cheung and Egerton 2007; Iannelli, Gamoran and Paterson forthcoming), although Boliver's (2011) analysis of British data for 1960-1995 finds relatively stable levels of inequality in total HE participation, with the social differentials between the sectors largely unchanged. These inequalities matter for social mobility to the extent that status differences among universities are reflected in differences in the positional advantage of their graduates. Employers recruiting to the most attractive jobs tend to favour graduates from elite institutions (Brown and Hesketh 2004; Morley and Aynsley 2007), who tend to enter higher-status occupations and earn higher salaries (Hussain, McNally and Telhaj 2009), although these advantages may partly reflect differences in the subjects studied or in qualifications on entry to HE (Purcell and Elias 2004; Strathdee 2009).

Many researchers who use the concept of effectively maintained inequality, and the related concepts of inclusion and diversion (eg Arum, Gamoran and Shavit 2007; Becker and Hecken 2009), do so within a theoretical framework of rational action - or at least a relatively weak and situational version of rational action as described by Goldthorpe (2000). An alternative perspective draws attention to cultural factors in explaining educational inequalities (Hatcher 1998). Reay, David and Ball (2005) describe a process of complex stratification and differentiation of HE institutions, and explore the ways in which this is reflected in the applications and choices of young people from different social and ethnic backgrounds. They argue that rational action theory 'underplays cultural context' (p.27), and they use Bourdieu's concepts of cultural and social capital and (especially) habitus to analyse the processes of choice among their sample. They describe university entry as 'a process of class-matching which goes on between student and university: a synchronisation of familial and institutional habitus' (p.94).

Both rational-action and culturalist theories may help to explain inequalities in HE (Power et al. 2003, van der Werfhorst 2010). Moreover, both predict that institutional hierarchies are resistant to change. From a

rational-action perspective, the positional advantage offered by high-status universities enables them to attract students from the most advantaged educational and social backgrounds, which further enhances their reputations and their links with employers looking for recruits with high social and cultural capital to fill the most desirable jobs. This creates a virtuous spiral which confirms their ability to offer positional advantage and reinforces the institutional hierarchy. Similarly, the processes of class-matching described by Reay, David and Ball reinforce existing differences in institutional habitus: institutions attract students who fit in with, and thus sustain, the institutional culture. Seen from both perspectives, institutional hierarchies in HE are an essential component of the processes of social reproduction and of the relations of power and advantage within society; attempts to change these hierarchies are therefore likely to be resisted. Even policies intended to widen access and potentially challenge institutional hierarchies may actually reinforce them. English universities used the access agreements introduced with the 2006 fee rises to consolidate their existing market positions (Callender 2009; McCaig and Adnett 2009).

Our analysis of the stability of institutional hierarchies, therefore, not only illuminates the processes invoked by sociological theories of social reproduction and social mobility; it also provides a general test of these theories, and their prediction of stable hierarchies, against the expectation that expansion and institutional restructuring cause these hierarchies to change.

The second sociological and policy issue which this paper addresses is the trend towards market-driven modes of governance of HE in England and many other countries (Brown 2013). The rationale which informs this market strategy claims to place 'students at heart of the system' and to empower them as consumers; institutions must adjust their provision to meet student demands or risk losing market share (BIS 2011). This rationale assumes that institutions' status and their position in the market are not fixed and will change in response to market pressures. It also assumes that students choose on the basis of factors, such as the quality, relevance and price of programmes, which institutions can modify in response to their preferences. But if students base their choices on historically-based status hierarchies which are slow to change, and beyond the control of the institutions concerned, the market rationale is called into question (Harrison 2011). An alternative view, supported by much sociological research on education markets, suggests that the market rationale does not apply to markets for positional goods such as HE. Education markets tend to reinforce mainstream academic values and therefore sustain a hierarchical differentiation of institutions based on common values, rather than a horizontal differentiation based on different missions. Institutions at different levels of the hierarchy typically pursue strategies which reinforce their market position and consequently their place in the hierarchy (Marginson 2004; Croxford and Raffe 2007; McCaig and Adnett 2009; Brown 2013).

Our study of the stability or instability of institutional hierarchies therefore tests an essential premise of the market strategy. It may also cast light on the impact of marketisation by assessing the effects of past, albeit partial, moves towards marketisation in England and comparing them with Scotland where the

marketisation of HE is less pronounced. Scottish policy is still guided, at least rhetorically, by a vision of HE as a public good (Scottish Government 2010). For example, an annual tuition fee of £1000 was introduced throughout the UK in 1998. In England it was increased to a maximum of £3000 in 2006 (and to £9000 in 2012, after the period of our study); in Scotland it was replaced in 2000 by a smaller, deferred 'graduate endowment' which was abolished in 2007. A comparison of England and Scotland therefore provides at least a weak test of the impact of marketisation.

Research questions

We therefore ask:

1. How stable have the institutional hierarchies defined by golden triangle, other founding Russell Group, other pre-1992 and post-1992 universities in England, and by ancient, old and new universities in Scotland, been between 1996 and 2010?

2. Has the 'marketisation' of HE in England helped to erode institutional status hierarchies?

3. Have the institutional sectors of HE become more or less similar with respect to the social and ethnic backgrounds of entrants?

Data

We use UCAS data on applications in 1996, 2000, 2004, 2006, 2008 and 2010. Established in 1993, UCAS provides a centralised system which manages nearly all applications to full-time undergraduate courses at HE institutions in the UK. Relatively few Further Education colleges recruit through UCAS, so the analyses reported below are restricted to full-time programmes in HE institutions. Under its agreement with UCAS the research team had access to institutional identifiers but agreed to respect the 'rule of three', which prohibited the identification of institutions in published outputs except in groups of three or more. This is one reason for our choice of the golden triangle rather than Oxbridge as our elite institutional category.

The UCAS applications process follows an annual timetable. Each applicant makes up to five (formerly six) applications; each application receives a conditional or unconditional offer or is rejected. (Applicants who receive no offers may then make further applications.) The applicant may accept one unconditional offer or a conditional offer plus an insurance choice, which may be conditional or unconditional. All other offers must be turned down. When the applicant's qualifications are known, and the outcome of conditional acceptances is thus determined, applicants who still do not have a place may look for a place through the Clearing service, also operated by UCAS, which aims to match unplaced applicants with unfilled places. The UCAS data describe the stages of this process as well as social, demographic and educational characteristics of applicants.

Measuring the strength of institutional hierarchies

We assume that the status of institutions is reflected in their unconditional attractiveness to applicants: other things being equal, potential students prefer a higher-status to a lower-status institution. Qualifications act as a currency to balance supply and demand. Higher-status 'selector' institutions attract well-qualified applicants and can set high qualifications requirements for admission; lower-status 'recruiter' institutions have to accept less-qualified applicants in order to fill their places.

We construct six indicators. The first two are reverse measures of institutional selectivity: they measure the status of each institution in terms of, respectively, the balance of supply and demand for places, and the proportion of places filled through Clearing. The next two indicators measure the status of each institution in terms of the qualification levels of applicants and entrants respectively. We use these four indicators to assess the changing strength of the hierarchy of institutional sectors by examining trends over time in (i) the differences between sector means and (ii) the heterogeneity of institutions within each sector. Our last two indicators are measured for the system as a whole, and are based on applicants' choices between pre-1992 and post-1992 universities in contexts where their preferences should not be influenced by their perceived chances of being accepted.

The stability of institutional hierarchies: England

For England, we compare the golden triangle (Oxford, Cambridge and the two London founder members of the Russell Group), the other nine English founder members of the Russell Group, the 26 other pre-1992 universities and post-1992 universities, whose number fluctuated between 39 and 49 over the period. The golden triangle and other Russell Group categories exclude the three English institutions which joined the Russell Group between 1996 and 2010. This is to avoid circularity: new members may have joined as a consequence of their increase in status.

(Figure 1)

Figure 1 shows trends in the sector averages of the two reverse indicators of institutional selectivity. The first, in Figure 1a, is the percentage of applicants to each institution who entered it. This is a crude indicator as it does not distinguish between cases where the university rejected the applicant and cases where the applicant rejected the university. It underestimates the selectivity of Oxford and Cambridge, whose admissions processes (with an earlier deadline for UCAS applications) may discourage speculative applications from applicants with a poor chance of success. This probably explains the relatively high entry rates among applicants to golden triangle universities, especially in the early cohorts. The differences among the other three sectors matched their position in the status hierarchy, with Russell Group universities the most selective and post-1992 universities the least selective. These differences were maintained over the period, with a very slight widening of the gap between other pre-1992 and post-1992 universities. The standard

deviations of institutional scores within each sector, not shown in Figure 1a, also show little change; none of the sectors became more heterogeneous over time.

The second indicator, the average percentage of entries through Clearing, reflects the number of places remaining unfilled after the first round of UCAS applications have been processed, and may indicate the extent to which institutions are 'recruiters' rather than 'selectors' (Figure 1b). The four sector averages vary in line with their position in the status hierarchy. Recruitment through Clearing declined in all sectors over the period, and the differences between sectors narrowed during the early part of the period. They widened again towards the end of the period, at least when expressed proportionately rather than in terms of absolute percentage-point differences. There was little change in the heterogeneity of any of the sectors except between 2006-2010, when the post-1992 institutions became more heterogeneous: their standard deviation increased from 9.2 to 12.1.

(Figure 2)

Both of these indicators are affected by applicants' tendency to choose institutions which are likely to accept them rather than those they would ideally like to enter: institutions may receive more applications simply because they set lower entrance requirements. Our next two indicators treat the qualification levels of applicants and entrants respectively as measures of an institution's status. We use UCAS point scores for 1996 and 2000 and UCAS tariff scores for the later years (2004-2010). These are available for 69% of applicants overall and 84% of applicants aged under 21, on whom the following analyses are based. Both scores are summary measures of attainment that take account of grades as well as numbers of qualifications. The more recent tariff score covers a wider range of qualifications than the earlier points score, including some 'vocational' qualifications which applicants and entrants to post-1992 universities were more likely to hold (Hoelscher *et al*. 2008). Consequently, our data may exaggerate any increase in the relative qualification levels of applicants and entrants to post-1992 universities between 2000 and 2004; they may therefore exaggerate any weakening of the institutional hierarchy.

The qualification scores are normalised, expressed in terms of standard deviations above or below the mean for all English-domiciled UCAS applicants in the given year. The average-qualified applicant in each year has a score of zero. Figure 2a reveals a rising trend in the average scores for golden triangle universities and, more gently, for the other Russell Group institutions, and broadly stable trends for the other pre-1992 universities and for the post-1992 institutions. The heterogeneity of the 'other pre-1992' category increased slightly over time - the standard deviation for institutions in the sector rose from 0.27 to 0.44 - while the heterogeneity of the other sectors remained stable. Data for the qualification levels of entrants, in Figure 2b, show relatively stable differences between the sectors except for the golden triangle which appeared to increase its elite status over the last two cohorts. As in the case of applicants, the 'other pre-1992' universities became slightly more heterogeneous but the 'other Russell Group' sector became more

homogeneous. We conclude that the qualifications indicators show a stable hierarchy with no evidence of narrowing differences, and some evidence of increased status differences at the top end of the hierarchy. This is despite the possible bias in our measures towards finding narrowing differences.

Our final two indicators exploit circumstances when the UCAS process requires applicants to make choices between institutions that should not be influenced by the perceived chances of success. They refer to dichotomous contrasts so we use them to compare all pre-1992 universities with post-1992 universities. Our data enable us to calculate them for the years 2006-2010 only.

The first indicator relates to the first and second (insurance) choices of applicants who received conditional offers. Applicants are committed to accepting their first choice if the offer is confirmed, so the order of these two acceptances should indicate a rational student's unconstrained preferences between the two institutions, regardless of their respective entry requirements. Our indicator is the ratio between two numbers: the number of applicants who name a pre-1992 university as their first choice and a post-1992 university as their insurance choice; and the number who name a post-1992 university as their first choice and a pre-1992 university as their insurance choice. The stronger the status hierarchy, the higher this ratio. Its value was 3.0 in 2006, 2.9 in 2008 and 3.1 in 2010.

The second indicator is based on applicants who received unconditional offers from both pre-1992 and post-1992 universities. They could only accept one such offer so they had to choose between the two types of university. Our indicator is the ratio between the number of these applicants who accepted an unconditional offer from a pre-1992 university and the number who accepted an unconditional offer from a post-1992 university. The value of this ratio was 1.7 in 2006, 1.8 in 2008 and 1.9 in 2010, suggesting a slight strengthening of institutional status differences.

Although each indicator has its weaknesses the six indicators taken together tell a consistent story: the hierarchy of the four university sectors was remarkably stable, with more evidence of widening differences between sectors (especially at the top of the hierarchy) than of narrowing. The two selectivity indicators respectively show a very slight widening and a very slight narrowing of the status differences between 1996 and 2006, but in both cases the trend is weak and the other indicators show stability. None of the indicators shows any narrowing of the status gap between 2006 and 2010, when market pressures increased, and four indicators suggest that differences between sectors widened slightly during this period.

There was a lesser, but still substantial, degree of stability in the status ordering of institutions *within* each sector. Taking the qualifications of entrants, probably the strongest indicator, as our measure of status we find that the 1996 ranking of each institution within its sector correlated with its 2010 ranking as follows: golden triangle 1.00 (based on four institutions); other Russell Group 0.67; other pre-1992 0.88; post-1992

0.61. Correlations based on the other indicators range from 0.37 to 1.00. On each indicator the post-1992 sector has the least stable within-sector ranking of institutions. Despite this, as we have seen the sector as a whole neither increased its average status relative to other sectors nor became more heterogeneous (only one indicator, the proportion recruited through Clearing, shows increased heterogeneity, and only between 1996-2000).

The relative internal dynamism of the post-1992 sector raises the question of whether its failure to increase its average status reflects an academic procession: an increase in status among the original post-1992 universities might have been balanced by the inclusion of newer universities with lower status. To test this hypothesis we recalculated the estimates in Figure 2 excluding post-1992 universities created later than 1996. This showed a pattern almost identical to that in Figure 2, with no evidence that even the longer-established post-1992 universities had narrowed the gap with the pre-1992s.

(Table 1)

We have tested our finding of the stability of the four-sector hierarchy in two further ways. First, repeating the analyses using data for males and females separately yields the same conclusions both about the status ordering of the sectors and the stability of this hierarchy over time. Second, we tested the hypothesis that status differences between sectors could be attributed to their different subject mixes. Table 1 shows the average status gap between pre-1992 (including Russell Group) universities and post-1992 universities in seven subject areas. The status gap is the difference between the average qualifications score of entrants to the subject in the average institution in each sector, with the scores calculated as in Figure 2 above. The status gaps within subject areas are generally as wide as, and in some cases wider than, the status gap across all subjects. Moreover, they are stable over time. Neither the size of the status differences nor their stability can be explained in terms of subject areas. Table 1 covers broad subject areas and cannot show the extent to which institutional differences are due to specific subjects which are not widely available across all sectors. However, it is unlikely that 'drilling down' to specific subjects would account for most of the sector differences or explain their stability.

(Figure 3)

The stability of institutional hierarchies: Scotland

We now present comparable data for Scottish HE institutions, based on applications by Scottish-domiciled applicants. The number of institutions is smaller, with four ancient universities, four other pre-1992 universities and six post-1992 universities at the end of the period. We therefore report the institutional averages within each sector, but not their standard deviations. Figures 3a and 3b present the two reverse-selectivity indicators for Scotland, comparable with Figures 1a and 1b for England. Neither shows a clear trend. Figure 3a suggests that the gap between post-1992 universities and older universities widened slightly after 2000. Figure 3b, showing the percentage of entries through Clearing, suggests that this gap

narrowed between 1996 and 2000 and widened again after 2004, especially in proportionate terms that allow for the overall decline in the proportions entering through Clearing.

(Figure 4)

Figures 4a and 4b present the two indicators based on the average qualification levels of applicants and entrants aged under 21. The measures are calculated in the same way as for England, but they are normalised based on Scottish applicants in the given year. Both figures show similar trends. Between 1996 and 2004 the status gap between the post-1992 universities and the two older sectors tended to narrow. Thereafter it remained relatively constant, except in the final cohort when it tended to widen, especially with the ancient universities. The narrowing between 2000 and 2004 may partly be an artefact of the switch from UCAS point scores to the UCAS tariff. However, if so it is surprising that no such impact was evident in the data for England, particularly as English but not Scottish vocational qualifications had been included in the UCAS tariff by this time. As in England, neither the status differences between sectors nor the trend in these differences can be attributed to different subject mixes (table not shown).

The indicators based on applicants' preferences among conditional and unconditional offers respectively also show stability. As in the case of England they can only be calculated for 2006, 2008 and 2010, and we use them to compare pre-1992 and post-1992 universities. The indicator based on student's first and insurance choices among conditional offers shows values of 2.2, 1.9 and 2.1 respectively for the three cohorts. The indicator based on students' acceptances among unconditional offers shows values of 2.4, 2.4 and 2.3.

The indicators tell a reasonably consistent story; status hierarchies within Scottish HE narrowed slightly during the early years of our study, but thereafter they remained stable and may have begun to widen again.

(Figure 5)

The social and ethnic backgrounds of entrants

We now examine whether the institutional sectors became more or less similar with respect to the social and ethnic backgrounds of entrants. A question in the UCAS application form asks under-21s to state the occupation of the parent, step-parent or guardian 'who earns the most'. Their responses were coded into the Registrar General's (RG) classification in 1996 and 2000 and the National Statistics Socio-Economic Classification (NS-SEC) from 2004 onwards. Figure 5 shows, for England, the percentage of entrants to each sector with a 'professional or managerial' parent: RG classes I and II or classes 1 and 2 of the 7-class version of NS-SEC. Percentages are based on all with occupations that could be coded. The two classifications are not directly comparable and the apparent decline in professional- and managerial-class entrants between 2000 and 2004 may reflect the change of classification rather than any widening of participation. The dip in 2008 probably reflects a change in question wording that affected that year only. Neither change appears to have affected the differentials between sectors. The proportion of entrants with a professional or managerial

parent declines in linear fashion as one descends the four sectors of the hierarchy, with little evidence of change over time. Analysis of applicants reveals similar patterns.

To the extent that the social-class measure is unreliable (Harrison et al. 2011) the differences between sectors will be under-estimated. The percentage of entrants from private secondary schools varied much more widely across sectors than the percentage with professional or managerial parents. In 1996 private schools accounted for 46.1% of entrants to the average golden triangle university but for only 8.3% of entrants to the average post-1992 university. These percentages have declined in all sectors (to 41.2% in the average golden triangle university) but the greatest proportionate decline was in the post-1992 sector, whose average intake in 2010 included a mere 4.3% from private schools.

(Figure 6)

Figure 6 presents the comparable data for Scotland. The social-class differences between the sectors were similar to those in England; they were stable over the early years despite the change in classification, but they narrowed slightly towards the end of the period. The proportion of home-domiciled students from independent schools was smaller in Scotland than in England. Nevertheless, as in England, university sectors were more strongly correlated with private schooling than with social class, and as in England there is no evidence that the differences between sectors became narrower. In 1996 the proportion of entrants to the average post-1992 university from private schools was even lower than in England, but it has not shown the same decline since then.

(Figure 7)

Within England, differences in the sectors' ethnic composition changed more than differences in their social composition. In 1996 blacks formed a much larger proportion of entrants to the average post-1992 university than to the average pre-1992 (and especially Russell Group) university. By 2010 the percentage of blacks among entrants to the average golden triangle university had barely changed (a net increase from 1.57% to 1.64%). By contrast, the 'other Russell Group' and 'other pre-1992' sectors had more than doubled the proportion of blacks among their entrants, narrowing the gap with the post-1992 sector (Figure 7a). The distribution of ethnic Asian students across the four sectors was rather different: in 1996 they formed similar proportions of entrants to the golden triangle, other pre-1992 and post-1992 sectors, and only in the 'other Russell Group' sector were they significantly under-represented. However, this apparently even distribution across three sectors disappears if we disaggregate the Asian category: for example, ethnic Chinese students were considerably over-represented among entrants to golden triangle universities whereas Pakistani students were over-represented among entrants to post-1992 universities. Between 1996 and 2010 there was a net increase in the proportion of Asians among entrants to all sectors except the post-1992 sector, where there was a significant decline. This trend cannot be explained by disaggregation: all the main Asian ethnic groups declined as a proportion of entrants to post-1992 universities between 1996 and 2010 except Bangladeshis,

who nevertheless declined as proportion of entrants to post-1992 universities after 2004.

There is no evidence of a similar change in Scotland, where ethnic minority numbers are much smaller. Differences between university sectors are small but in the expected direction, with Asians and blacks most strongly represented in the average post-1992 university and least strongly in the average ancient university (figure not shown).

Discussion

We posed three research questions at the beginning of this paper. The first asked about the stability of the institutional stratification of English and Scottish HE between 1996 and 2010. We find a remarkably stable hierarchy, especially in England. Taking all our indicators together, we find no evidence that the status distinctions associated with the former binary line, the Russell Group or the golden triangle have become less important; if anything they have strengthened, especially at the top end of the hierarchy and towards the end of the period. There is even a significant degree of continuity in the status ordering of institutions within sectors. There has been most change within the post-1992 sector but this sector has neither become more heterogeneous nor increased its status relative to other sectors. We conclude that not only did the English university system retain its stratified character, but its stratification was as strongly based on the former binary divide in 2010 as it was in the 1990s.

The institutional stratification of HE in Scotland has been almost as stable as that in England. Scottish post-1992 universities slightly narrowed the gap with the older universities in the early years of our study, but some of these gains were reversed in later years and the net change was modest. The initial narrowing of the status gap may reflect the distinctive history of the Scottish central institutions, whose mission and character, although diverse, distinguished them more clearly from the universities. Their re-designation as universities in 1992 may have stimulated more radical changes in mission compared with English polytechnics, many of which already closely resembled universities.

Our second question asked whether the 'marketisation' of HE has helped to erode institutional status hierarchies. We explore this by comparing England and Scotland, countries which respectively did and did not move towards a market model over the period, and within England by comparing the periods before and after 2006 when market pressures intensified. Neither comparison provides any evidence that markets in HE subvert institutional hierarchies. Indeed, there was more evidence of hierarchies becoming weaker in Scotland than in market-led England, and some of our indicators show hierarchies in England becoming stronger after 2006. The policy changes in England in the period to 2010 fell short of those advocated by market ideologies, or those introduced in some other countries (eg Strathdee 2011); the 2012 reforms may provide a stronger test of the power of markets to challenge institutional hierarchies. The stronger conclusion from our study is that institutional hierarchies are resistant to change, and that it is unrealistic to expect any but

the most powerful of interventions to have a radical impact. Moreover, the assumption underlying market policies, that consumers base their HE choices on factors that institutions can change such as the content, quality and price of their programmes, and not on factors beyond their control such as their history and their past reputation, is questionable.

Our third question asked if the institutional stratification of HE bore a stable relationship to the social and ethnic composition of students. With respect to ethnicity, we find differences between sectors in the 'expected' direction in Scotland. In England the differences narrowed slightly with respect to the recruitment of black students, and changed more radically with respect to Asians, whose representation in post-1992 universities declined sharply. Changes in relation to social background were much smaller. Sector differences in the percentage of entrants from professional and managerial class backgrounds remained stable in England and declined very slightly in Scotland. In both countries the sector differences in recruitment from private schools were much wider than in respect of social class, and they became wider. Studying a cohort of young people entering university before the binary system was abolished, Power et al. (2003: 90) found that polytechnics 'were not considered acceptable alternatives' to university for students at private schools. Not only did this apparent rejection persist after the polytechnics became universities, but it appeared to become stronger over subsequent decades. The relationship between the institutional stratification of HE and social reproduction has not weakened but it may be increasingly reflected in pathways from private schools to particular HE institutions.

Our main conclusion is that the institutional stratification of HE has been stable and resistant to pressures for change from expansion, institutional restructuring or the development of market arrangements. This stratification is embedded in wider social and economic structures, although other evidence, such as on the relation between institutional sectors and labour-market recruitment, would be needed to elaborate the detailed nature of this embeddedness. In the meantime, it will be further tested by the development of stronger market mechanisms in English HE.

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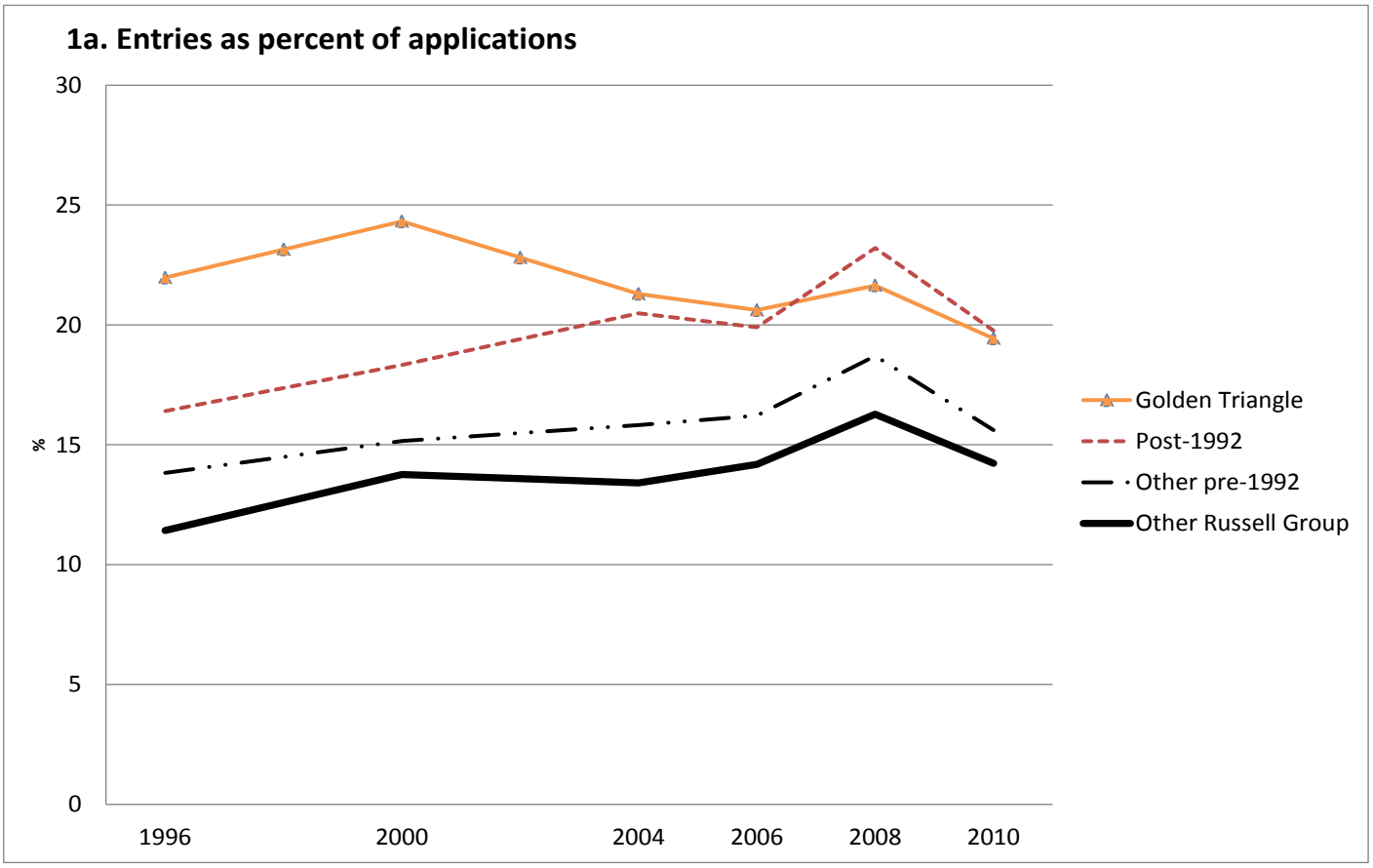
Table 1: Mean difference in average qualification scores of entrants to pre- and post-1992 universities, by cohort and subject area: England

	1996	2000	2004	2006	2008	2010
Medicine and vet medicine	1.98	1.85	1.99	1.90	1.82	1.84
Subjects allied to medicine	0.90	0.90	0.73	0.78	0.85	0.87
Sciences	1.16	1.16	1.14	1.11	1.18	1.20
Engineering and technology	1.10	1.03	1.08	1.04	1.07	1.21
Social science and law	1.07	1.09	1.09	1.07	1.08	1.10
Arts	1.00	1.00	0.96	0.99	1.04	1.03
All subjects	1.08	1.11	1.10	1.08	1.10	1.14

Note: universities with fewer than 20 entrants in the given subject area and cohort are excluded.

Figure 1: Reverse indicators of selectivity of institutions in four sectors: England



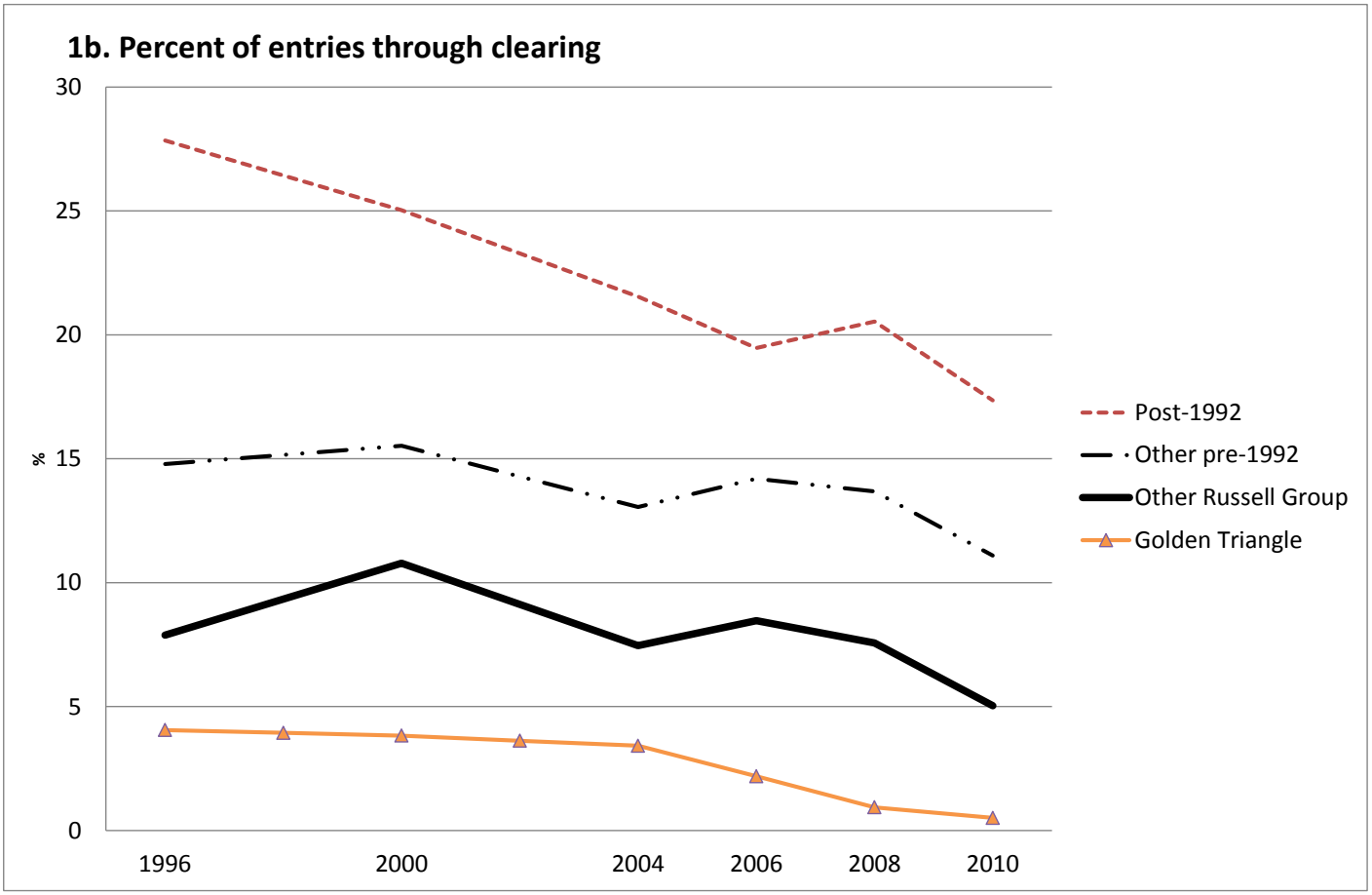
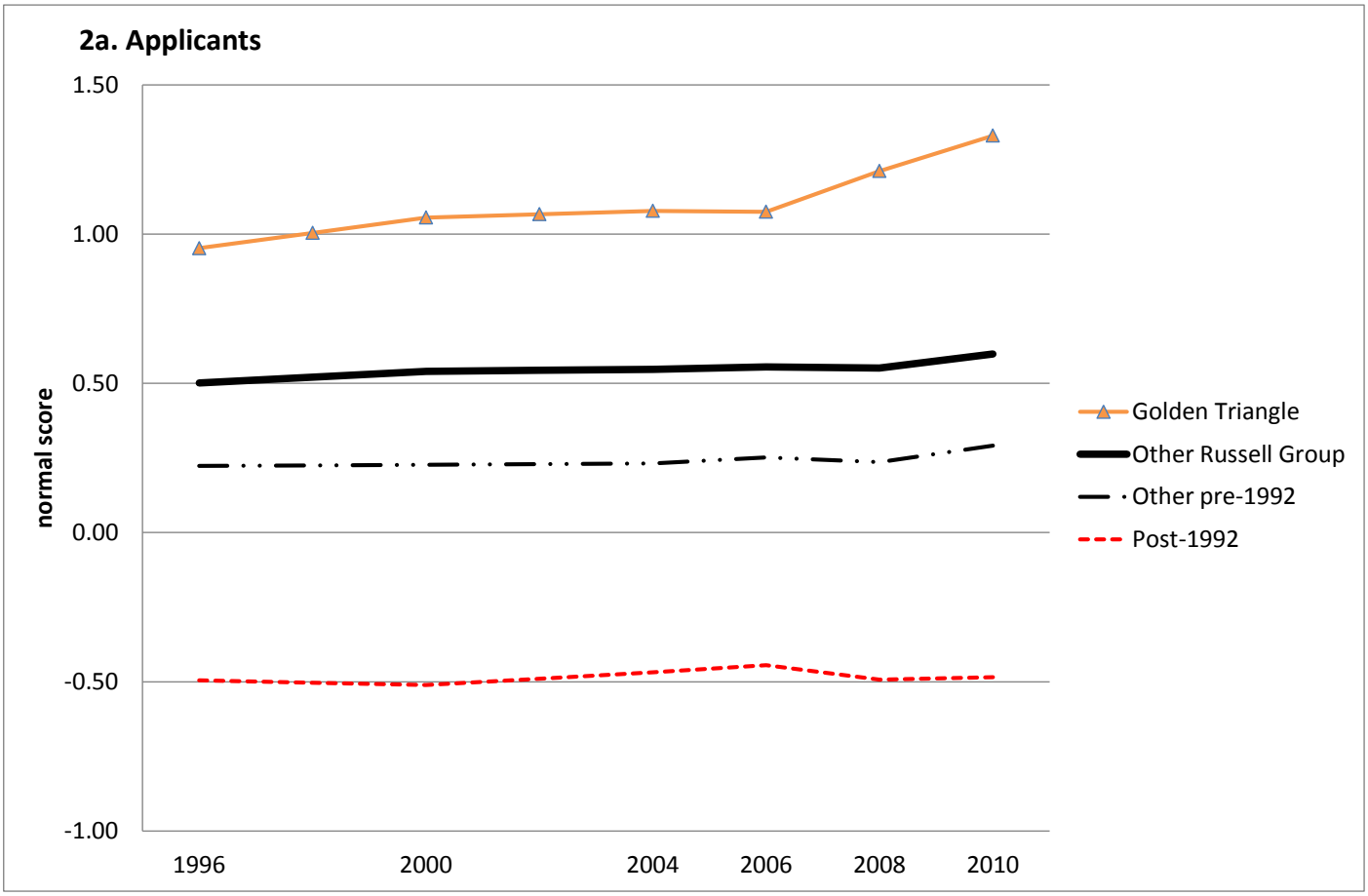


Figure 2: Average qualification levels of under-21 applicants and entrants to institutions in four sectors: England



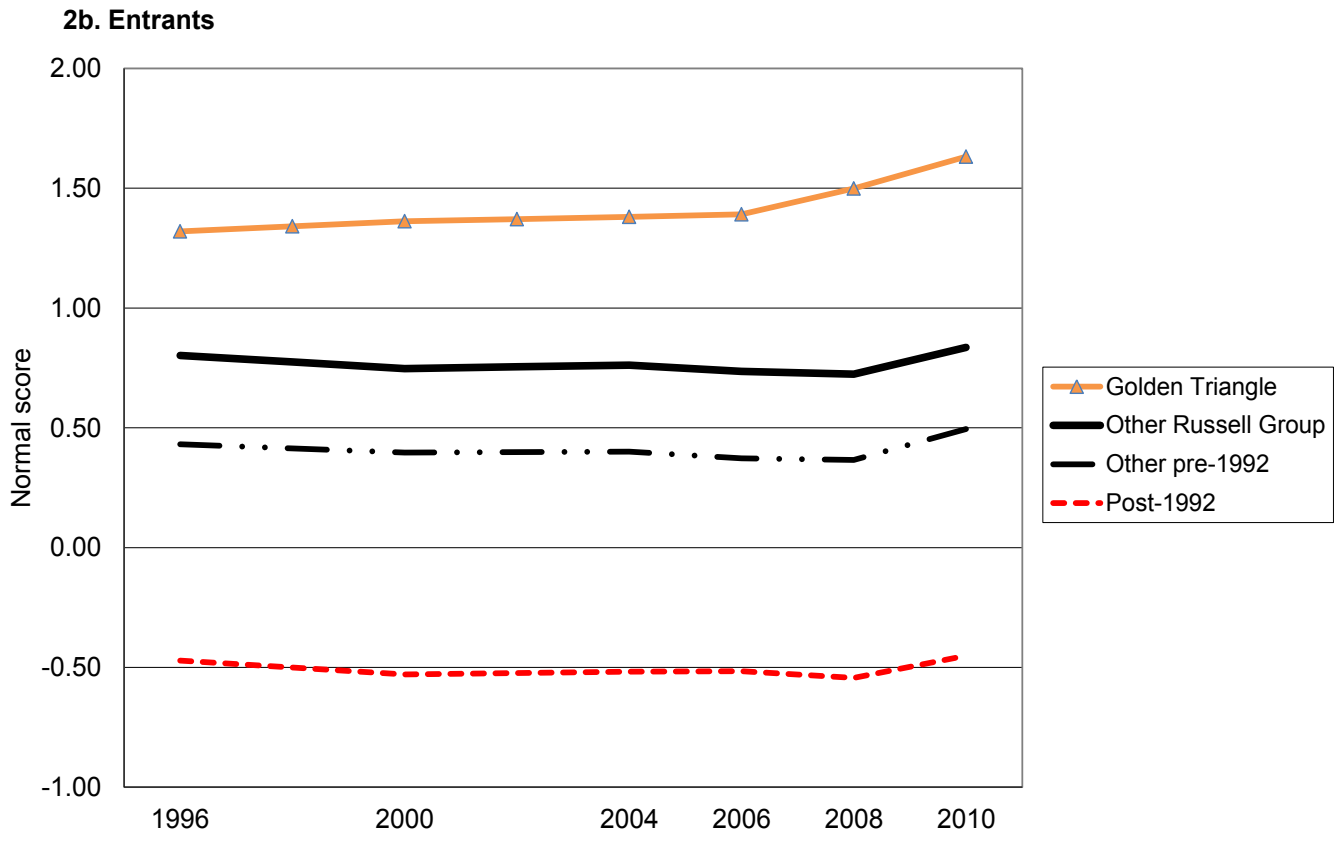
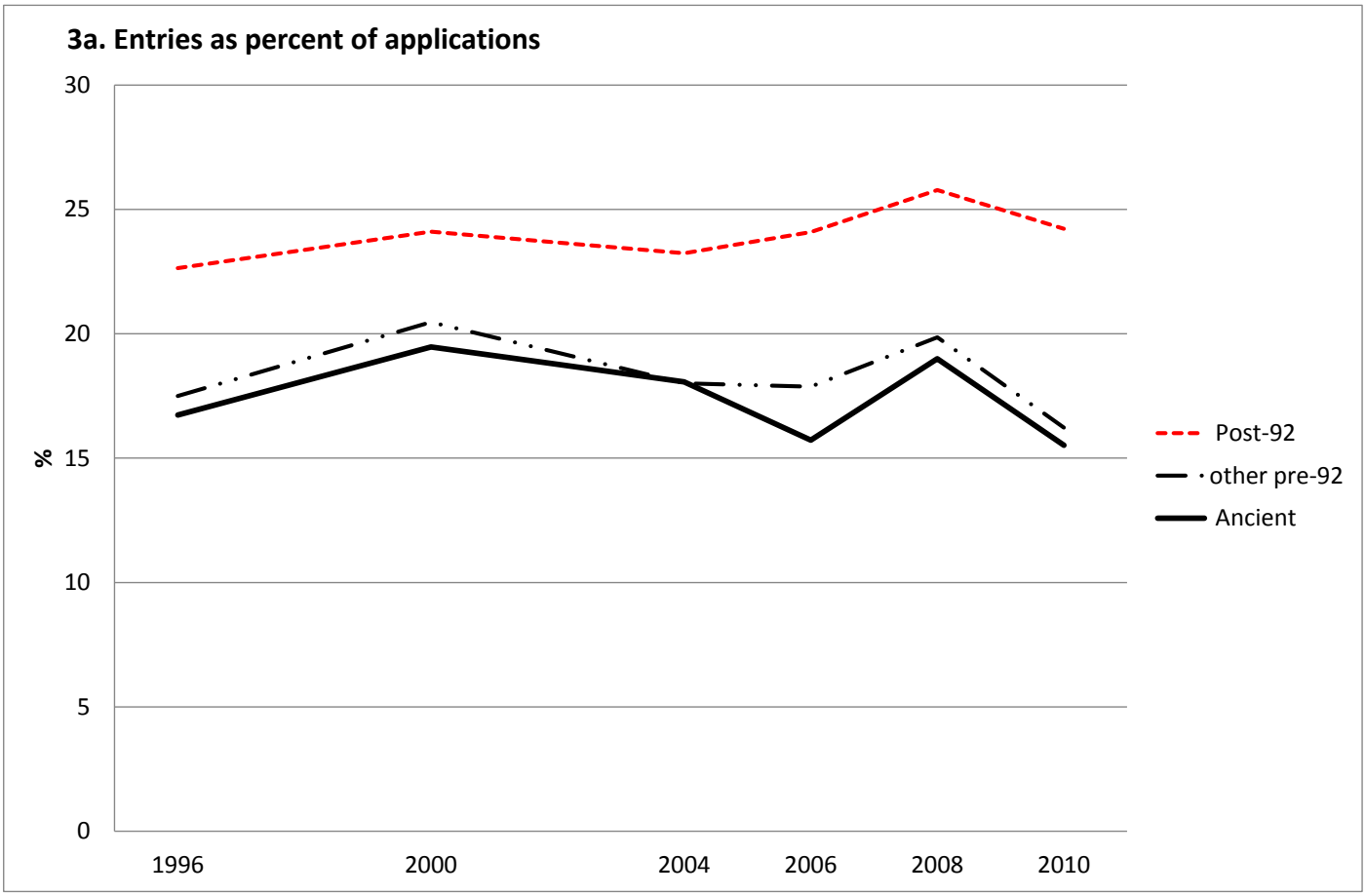


Figure 3: Reverse indicators of selectivity of institutions in three sectors: Scotland



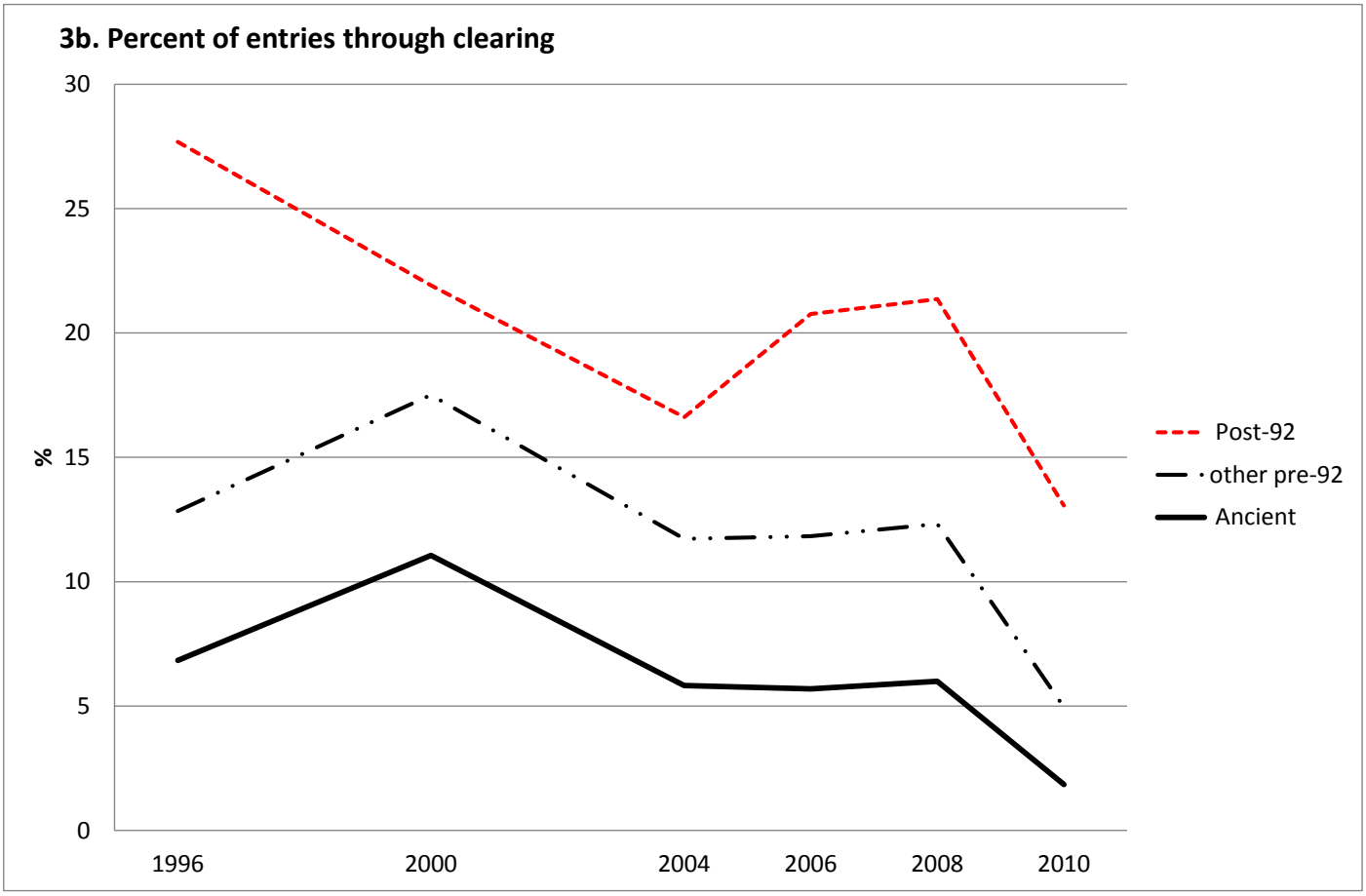
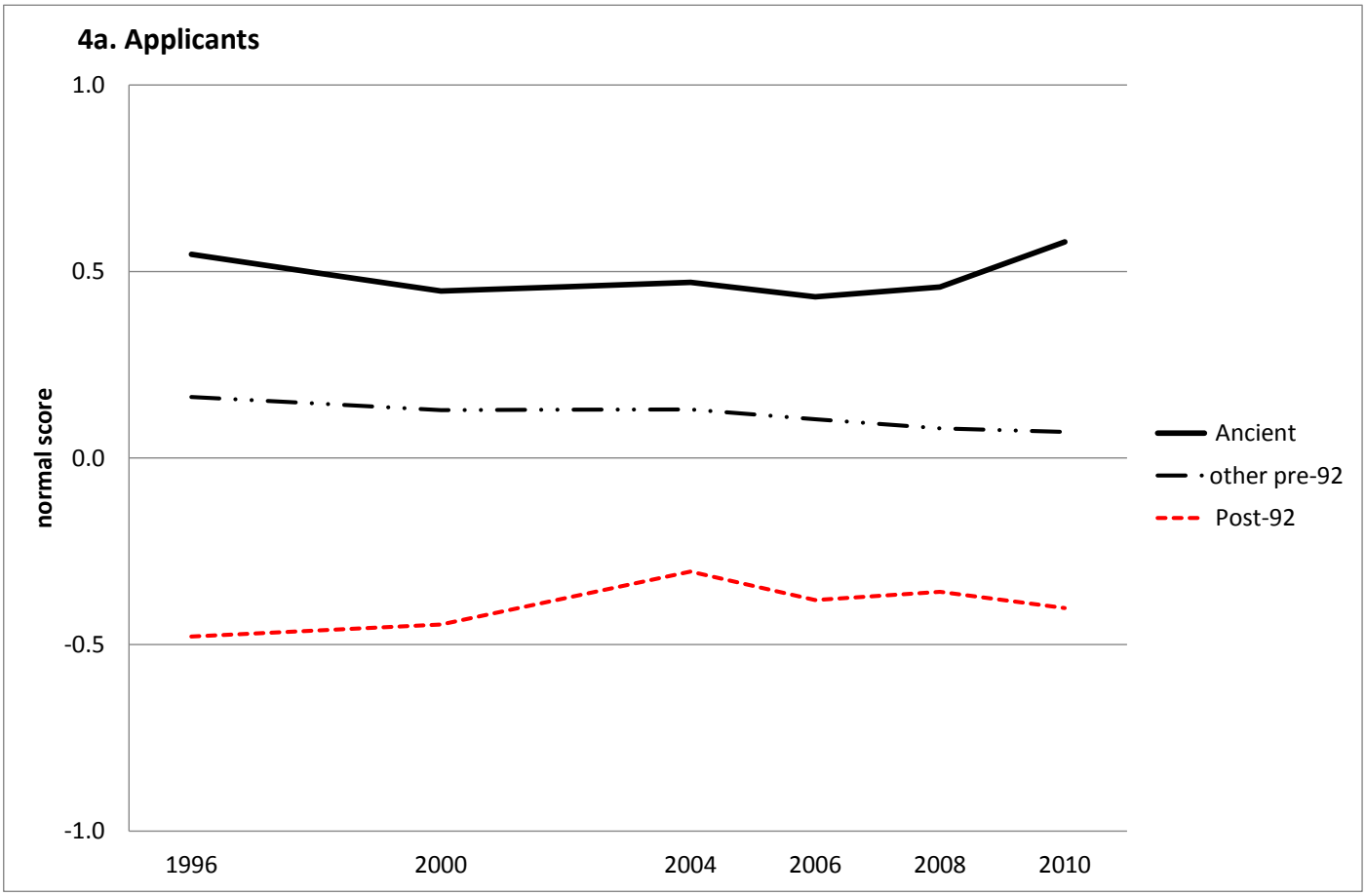


Figure 4: Average qualification levels of under-21 applicants and entrants to institutions in three sectors: Scotland



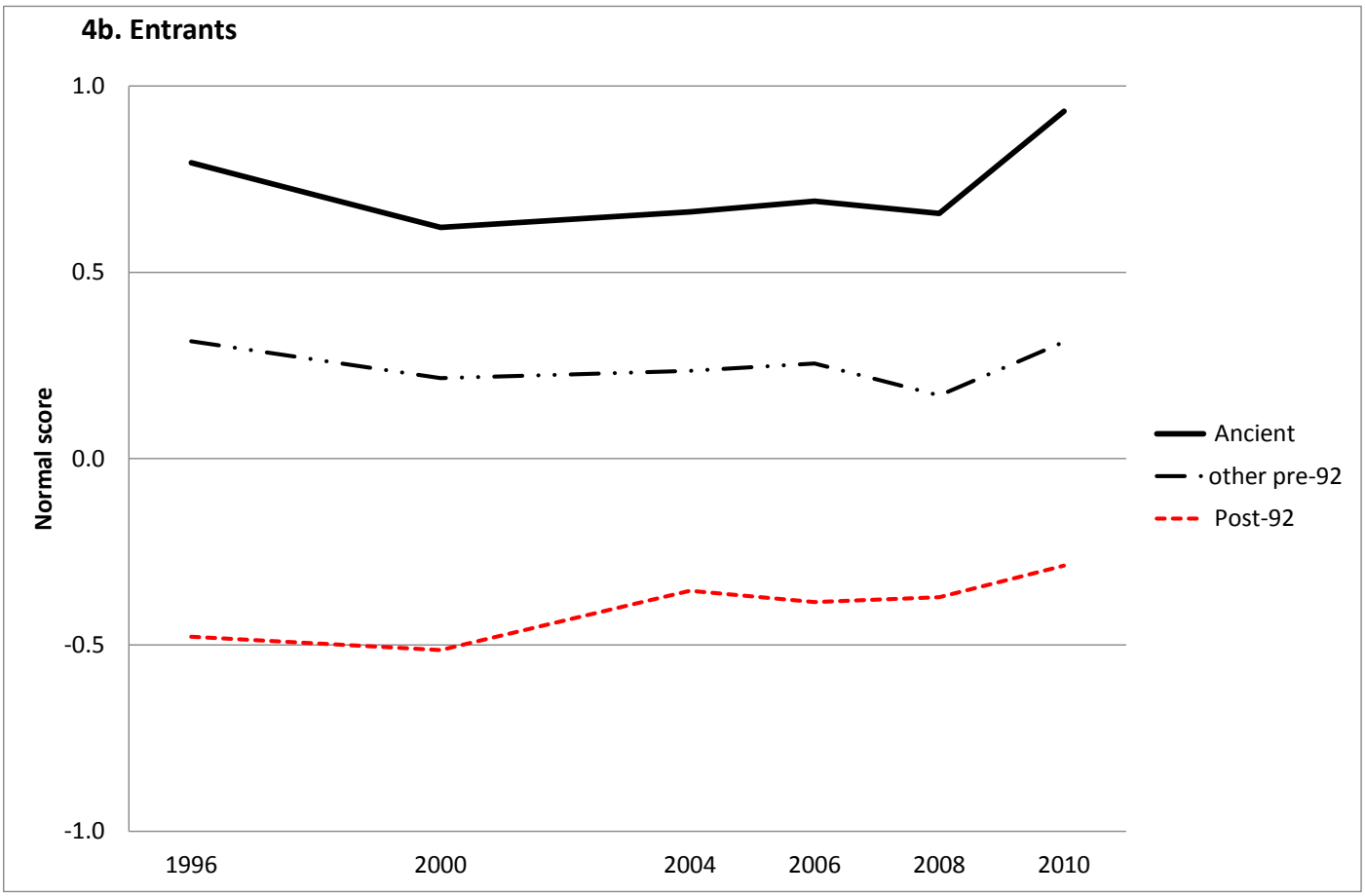


Figure 5: Average percentage of under-21 entrants (i) from professional and managerial class, and (ii) from private schools, by university sector: England

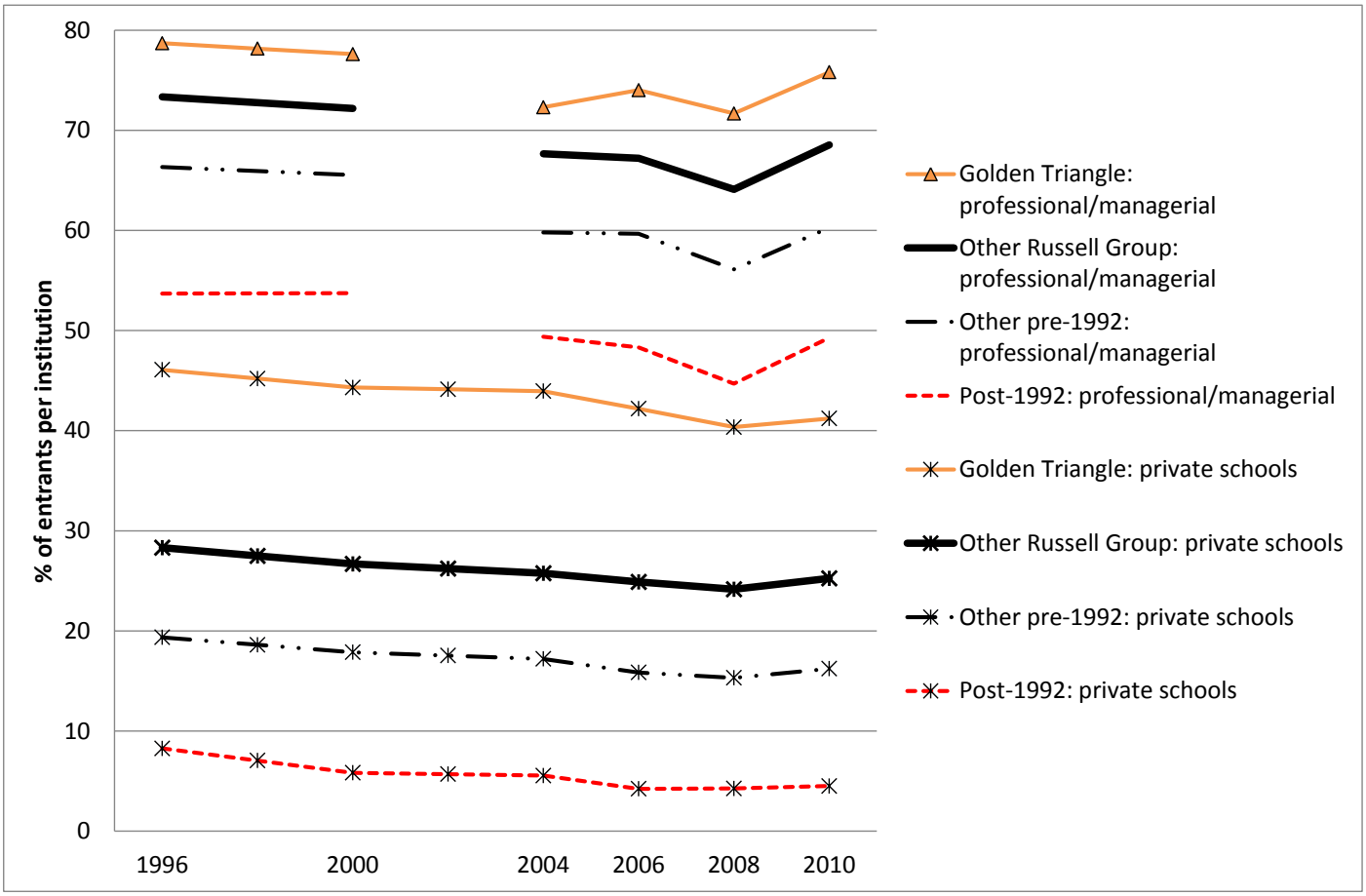


Figure 6: Average percentage of under-21 entrants (i) from professional and managerial class, and (ii) from private schools, by university sector: Scotland

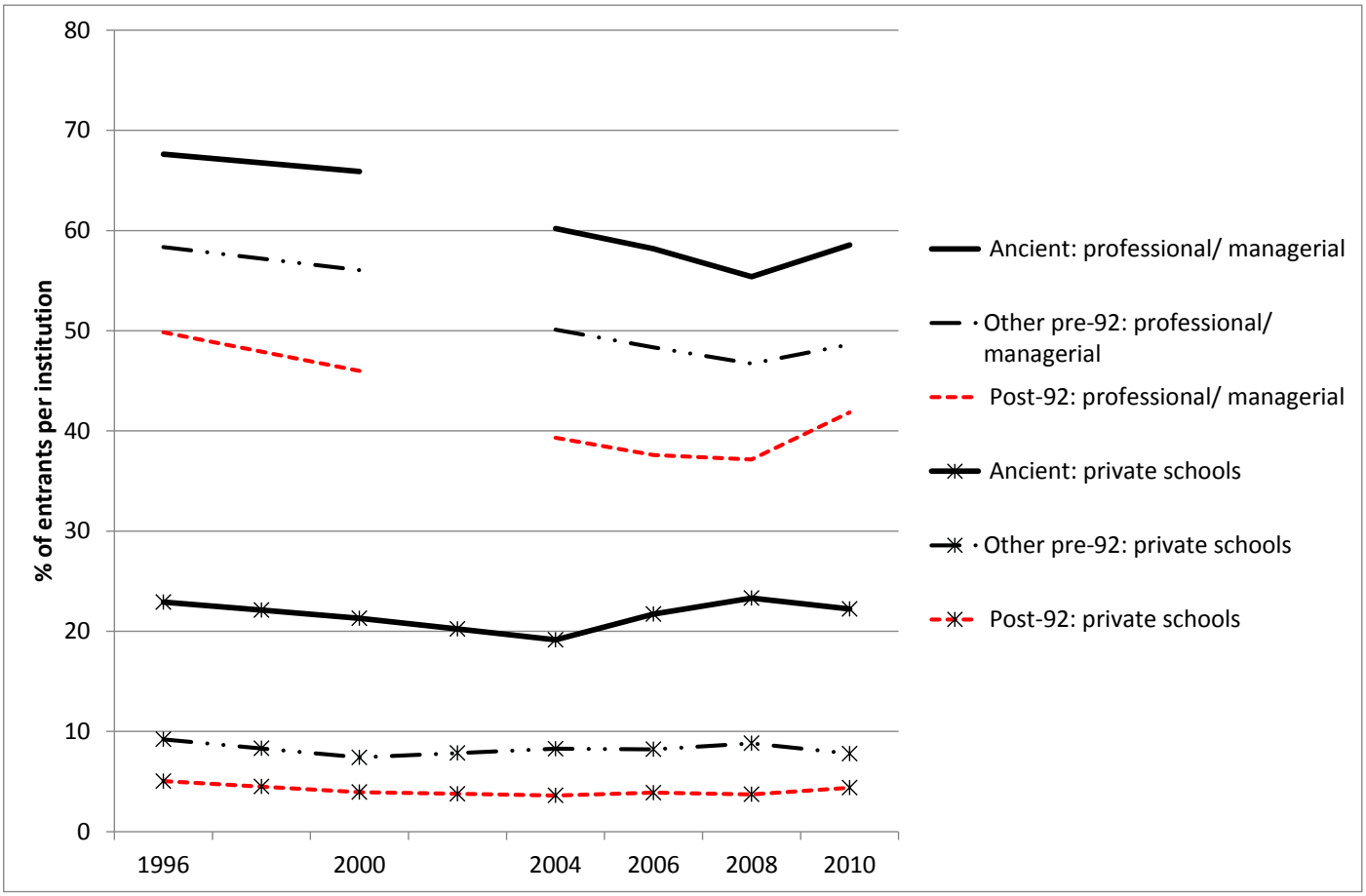


Figure 7: Average percentage of (a) Black entrants and (b) Asian entrants, by university sector: England